

Title: Developing Environmental Public Health Indicators: Lessons Learned

Keywords: Indicators, Methods

Background: The JHU Center for Excellence in EPHT developed and evaluated environmental public health indicators, examining mercury emissions, air toxics, and urban sprawl.

Objective(s): To provide lessons learned from the development and piloting of environmental public health indicators using national data sets.

Methods:

Each indicator was developed and pilot tested using spatial and temporal analysis.

Mercury Emissions: Using national data from US EPA, a mercury emissions indicator was developed. Its relationship to fishing advisories in the United States was examined.

Air Toxics: An air toxics indicator for Benzene, 1,3 Butadiene, and Ethylene Oxide was developed using data from the National Air Toxics Assessment. Its relationship to leukemia risk in NJ counties was examined using data from the NJ Cancer Registry.

Urban Sprawl: An indicator of urban sprawl was developed using data from the US Census Bureau. The relationship of urban sprawl and obesity in NJ counties was examined using data from the CDC's Behavioral Risk Factor Surveillance System.

Results: These projects provide important lessons for the development and utilization of environmental public health indicators. First, they show data availability and consistency play a crucial role in indicator selection and utilization. Second, they demonstrate that tracking requires an interdisciplinary set of skills, and support the need for continued funding, training, and technical assistance for the tracking workforce. Finally, they exhibit the difficulty of interpreting indicator results by showing how factors such as indicator definition and geographical scale impact results.

Conclusion/Evaluation: These indicator projects demonstrate that environmental public health indicators can be developed using existing national data sources, but are often limited by data inconsistencies and lack of accessibility.

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